CLAIMS

1. A computer-implemented method for the replacement of
equipment in a plant arranged with a control system, in
which a replacement operation is conducted at least in part
by means of a first software application component for
conducting e-procurement operations whereby one or more
replacement devices complying with a defined specification
may be procured from one or more external suppliers, which
first software application component is functionally linked
with at least one second software application component
which represents and manages runtime operational data
associated with said equipment, such that e-procurement
operations may be initiated via said at least one second
software application component.

2. A method according to claim 1, wherein said at least
one second software application component comprises a
reporting software function for reporting on an operational
condition monitored during runtime of the industrial plant.

3. A method according to claim 2, wherein said at least
one second software application comprises a function for
producing one or more of a production report, a quality
report, a cost of operation report.

4. A method according to claim 1, 2 or 3, wherein said at
least one second software application component comprises a
control software function for controlling operational
conditions relating to said equipment.

5. A method according to any preceding claim, wherein said at least one second software application component comprises a graphical software function for producing a graphical runtime representation of said equipment in its operational context of said plant, whereby said management function for said runtime operational data is accessed.

6. A method according to claim 5, comprising the steps of:

a user selecting a presentation of a menu via said runtime representation of said equipment;

retrieving a specification stored, or generated on the basis of stored data, for said equipment; and

procuring the replacement apparatus according to at least part of said specification.

7. A method according to claim 6, comprising providing said user with an option to alter said specification after the specification is retrieved.

8. A method according to claim 6 or 7, wherein said presentation is selected from a graphical representation on a screen of any of:

a computer connected by a LAN network to the process control system;

a computer connected by a WAN network to the process control system;

a computer connected by a telephone network to the process control system;

a computer connected by a short range radio link to the process control system;

a mobile telephone connected by a telephone network to the process control system; and

a mobile telephone connected by a short range radio link to the process control system.

9. A method according to claim 6, 7 or 8, comprising providing said user with confirmation data once a preferred replacement has been identified, and said user selecting a an option to execute a purchase of said replacement.

10. A method according to any preceding claim, wherein said e-procurement operations comprise the steps of requesting, via a data communications network, a plurality of proposals for supply from a plurality of different suppliers, and selecting a preferred replacement from said proposals.

11. A method according to any preceding claim, wherein said e-procurement operations comprise the step of requesting an approval for a purchase of a predetermined value from a person or process having authority to give approval to make said purchase.

12. A method according to any of claims 1 to 5, wherein said initiation of e-procurement operations is arranged to occur automatically in response to operational data associated with said equipment received from said at least one second software application component.

13. A method according to any preceding claim, comprising the steps of:

examining one or more prices and conditions retrieved in the e-procurement operations;

forming a negative buying decision;

changing at least one part of the replacement apparatus specification to initiate a modified e-procurement process;

examining one or more new prices and conditions retrieved in the modified e-procurement process; and

transmitting a purchase confirmation to an identified preferred supplier.

14. A method according to any preceding claim, comprising the steps of:

performing iterations of the cost evaluation of the specification in which specification factors or parameters are changed

-judging each evaluation result in accordance with a predefined algorithm, to finalise an e-procurement process.

15. A procurement system for ordering equipment for an industrial plant, said system including means for transmitting information including a specification for said equipment and a means for communication with suppliers over a network, wherein the system comprises:

a first software application component for conducting e-procurement operations whereby one or more replacement devices complying with a defined specification may be procured from one or more external suppliers, which component is functionally linked with at least one second software application component for managing runtime operational data associated with said equipment, such that

e-procurement operations may be initiated via said at least one second software application component.

16. A procurement system according to claim 15, wherein the system includes means for communicating the specification for said replacement apparatus to one or manufacturers or suppliers of the replacement apparatus or part or related service thereof.

17. A procurement system according to claim 15, comprising software means to match a registered or identified logged-in prospective customer to a history of details of specification selection, and subsequent changes to specification stored in a database of the system.

18. A procurement system according to claim 15, comprising software means to match a registered or identified logged-in prospective customer to a history of details of specification selection comprising digital identifier means such as a cookie stored in a computer used by the prospective customer.

19. A computer program code element, comprising computer code means or software code portions for enabling a computer or a processor to carry the steps of a method according to any of claims 1 to 14.

20. A computer program code element, comprising computer code means or software code portions for enabling a computer or a processor to retrieve information about replacement equipment, whereby said computer or processor carries out actions to:

-receive information from a database detailing equipment specification;

-receive input identifying a parameter relating to delivery times;

-conduct e-procurement operations to obtain at least one quote for a given specification and delivery time.

21. The computer program code element of claim 20, wherein the computer code means or software code portions comprise software means enabling a user to:

-change a at least one parameter relating to the replacement apparatus specification,

- initiate e-procurement operations to obtain at least one quote for the new specification.

22. The computer program code element of claim 21, wherein the computer code means or software code portions comprise software means enabling a user to:

-repeatedly change at least one parameter relating to the replacement apparatus specification,

-carry out repeated e-procurement operations for the new specification until the received quote indicates a financial cost which is equal to or less than a predetermined target cost.

23. The computer program code element of claim 21 or 22, wherein in that the computer code means or software code portions comprise software means enabling a user to:

-repeatedly change at least one parameter relating to the replacement apparatus specification,

-carry out repeated e-procurement operations for the new specification until the received quote indicates a delivery

date which is equal to or less than a predetermined target date.

24. The computer program code element of any of claims 20 to 23, wherein the computer code means or software code portions comprise software means enabling a user to communicate a buying decision, based on one or more prices and conditions resulting from the e-procurement operations for a selected specification, by means of a single action by the user.

25. The computer program code element of any of claims 20 to 24, wherein the computer code means or software code portions comprise software means to communicate a decision to buy replacement equipment as a purchase order to a selected manufacturer or distributor.

26. The computer program code element of any of claims 20 to 25, wherein the computer code means or software code portions comprise executable parts formed written in as one or more object oriented programs.

27. The use of the computer program code element of any of claims 19 to 26 over a public data communications network such as the Internet by a prospective customer to evaluate a price for one or more devices in order to make a buying decision.

28. A computer program contained in a computer readable medium, comprising computer program code means to make a computer or processor carry out the steps of a method according to claims 1-14.

29. A computer data signal embodied for communication in a computerised system, the communication being associated with replacement of equipment in a process control system for an industrial plant, wherein the data signal comprises information derived from a maintenance specification representing said equipment in a software application for conducting runtime maintenance of said equipment in the control system.

30. A computer data signal as claimed in claim 29, wherein the communication comprises at least one part identifying the equipment and one part identifying a desired delivery date or date range.

31. A method of generating a computer data signal as claimed in claim 29 or 30, wherein the computer data signal is generated in an automatic replenishment procedure of the computerised system, on the basis of an event trigger stored in the computerised system.

32. A method of generating a computer data signal as claimed in any of claims 29, 30 or 31, wherein the computer data signal is generated by an operator of the computerised system during runtime maintenance operations for said industrial plant.